

Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford (RL-0040)

R. E. Wilkinson, Vice President, Deactivation &
Decommissioning/(509) 373-9841

B. H. Ford, Vice President, Soil and Groundwater
Remediation/(509) 372-8123

R. G. Slocum, Vice President,
Closure Services and Infrastructure/(509) 372-1843

Before



After



*Completed Project L-626, 100B Area Export Water System Reliability
Enhancements, construction, two weeks ahead of schedule*

Overview

This section addresses Project Baseline Summary (PBS) RL-0040, *Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford*. There are three major components to this work scope:

- Deactivation & Decommissioning (D&D) [R. E. Wilkinson],
- Waste Sites Remediation [B. H. Ford], and
- Reliability Projects [R. G. Slocum].

NOTE: Unless otherwise noted, all information contained herein is as of the end of December 2007.

Notable Accomplishments

Deactivation and Decommissioning

200-UW-1 U Plant Zone Waste Site Remediation

- Interim Record of Decision (ROD) for U-8 crib was transmitted to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) per direction of RL.
- Initiated Desk Top Characterization of 200-UW-1 cribs.
- Initiated deep vadose zone supplemental characterization Data Quality Objective (DQO).
- Started Baseline Change Request (BCR) process for change to gather more characterization data.

221-U Canyon Facility

- Held discussions with the regulators and prepared Draft C revisions to the Remedial Design/Remedial Action Work Plan (RD/RAWP) for CERCLA implementation and incorporation of the Surveillance and Maintenance Plan.
- Completed draft of the *Project Experience Report, Canyon Disposition Initiative* and incorporated internal review comments.

231-Z Inventory Reduction

- Received and evaluated proposals for the procurement of the glovebox shipping containers.
- Released task order for the Non-Destructive Assay (NDA) to the Pacific Northwest National Laboratory and began NDA preparations.

200 North Sites (200-CW-3 Operable Unit)

- Completed re-vegetation of excavated sites 2, 3, 5, and 7.
- Transmitted to RL for regulatory approval the Tri-Party Agreement Change Package (C-07-07) to transfer nine waste units into 200-CW-3.

BC Control Area

- Transmitted the BC Control Area (BCCA) engineering evaluation/cost analysis (EE/CA) to RL for review and subsequent transmittal to Ecology.
- RL informally transmitted the BCCA Engineering evaluation/cost analysis (EE/CA) to Ecology for review and comment.

Waste Site Remediation

- Received regulator approval of Model Group Rev. 0 Supplemental Work Plan.
- Submitted Rev. 0 Model Group 5 Sampling Analysis Plan (SAP) to Ecology.
- Completed review of PCB sampling/analysis for the Ecological Risk Assessment; no additional sampling recommended.
- Completed electric resistivity conductivity field work for 200-TW-2 and 200-TW-1/PW-5.
- Completed sampling of 218-W-4C Burial Ground Trenches 20, 24, and 29; initiated sampling of Trench 4.
- Issued the 200-SW-1/2 DQO report.
- Received EPA approval on 200-PW-1/3/6 Remedial Investigation Report.

Notable Accomplishments continued

Reliability Projects

- Completed construction, Project L-626, *100B Area Export Water System Reliability Enhancements*, two weeks ahead of schedule.
- Completed Project L-638, *2266E Facility Air Quality Modifications*
- 2005 Energy Policy Act:
 - Completed development of ten mitigation plan revisions, incorporating data from compliance plans, and submitted to RL.
 - Submitted mitigation plan updates to Western Electric Coordinating Council (WECC).
 - Performed impact analysis of WECC regional reliability standards.

FY 2008 Funds vs. Spend Forecast (\$M)

	Projected FY 2008 Funding	FY 2008 Fiscal Year Spending Forecast	Variance
RL-0040 Nuclear Facility D&D, Remainder of Hanford	\$ 87.8	\$ 80.1	\$ 7.7

Schedule/Cost Performance (\$M)

Nuclear Facility D&D, Remainder of Hanford	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion (FY08/ CTD)
Current Period (Month)	\$4.2	\$4.2	\$4.6	\$0.0	0.0%	-\$0.3	-8.2%	\$73.3
Cumulative-to-Date (FY 2004-Present)	\$269.8	\$263.3	\$261.2	-\$6.6	-2.4%	\$2.1	0.8%	\$328.9

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$6.6M/-2.4%):

The unfavorable schedule variance (SV) for the D&D Project organization (-\$0.9M) is due to:

- Delays in receiving ROD approval and related activities for the U Plant Waste Sites (200-UW-1) has also impacted Deep Vadose Zone Characterization, RDR/RAWP, Treatability Test Plan and W-42 Contamination activities (-\$0.7M).
- Delays in approving the work package for Surveillance and Maintenance REDOX EF-2 Fan Repairs and Field Work for U Plant EF-2 Fan Repairs (-\$0.1M).

The unfavorable schedule variance for Waste Site Remediation (-\$5.7M) is largely due to the following:

- Delays in 200-CW-1 – SAP approval (-\$2.9M).
- Delays in 200-SC-1 – Work Plan approval (-\$0.4M).
- Delays in 200-MW-1; late SAP approval, driller availability for A-2 Borehole, and delays on the Environmental Restoration Contract (ERC) data analysis (-\$0.8M).
- CP Integration and Planning – Planned engineering studies not needed – scope will not be performed (-\$0.6M).
- Misc. delays – (-\$0.9M).

The SV for Reliability Projects is within established thresholds.

Schedule/Cost Performance (\$M), continued

CTD Cost Performance (+\$2.1M/+0.8%):

The favorable cost variance (CV) for D&D (+\$2.7M) is primarily due to factors as follows.

- Prior year cost overruns in 200-UW-1 U Zone Waste Site Remediation (-\$4.7M) resulting from:
 - Additional direct push sampling during field investigation to determine contamination levels.
 - Greater than planned effort to resolve Feasibility Study/Planning Package (FS/PP) comments and Remedial Design SAP.
 - Delays in barrier construction without reductions in staffing levels.
 - Lateral spread of contamination at 200-W-42, resulting in more waste containers being shipped to the Environmental Restoration Disposal Facility (ERDF) than planned.
- Prior year efficiencies in Surveillance and Maintenance (S&M) staff resulting from not replacing budgeted staff, and loaned labor to higher priority projects within D&D. Also due to lower than planned corrective maintenance in prior years (+\$3.1M).
- Prior and current year variance distributions (passbacks) in Project Management and Support (\$4.4M)

The unfavorable cost variance for Waste Site Remediation (-\$1.3M) is largely due to the following:

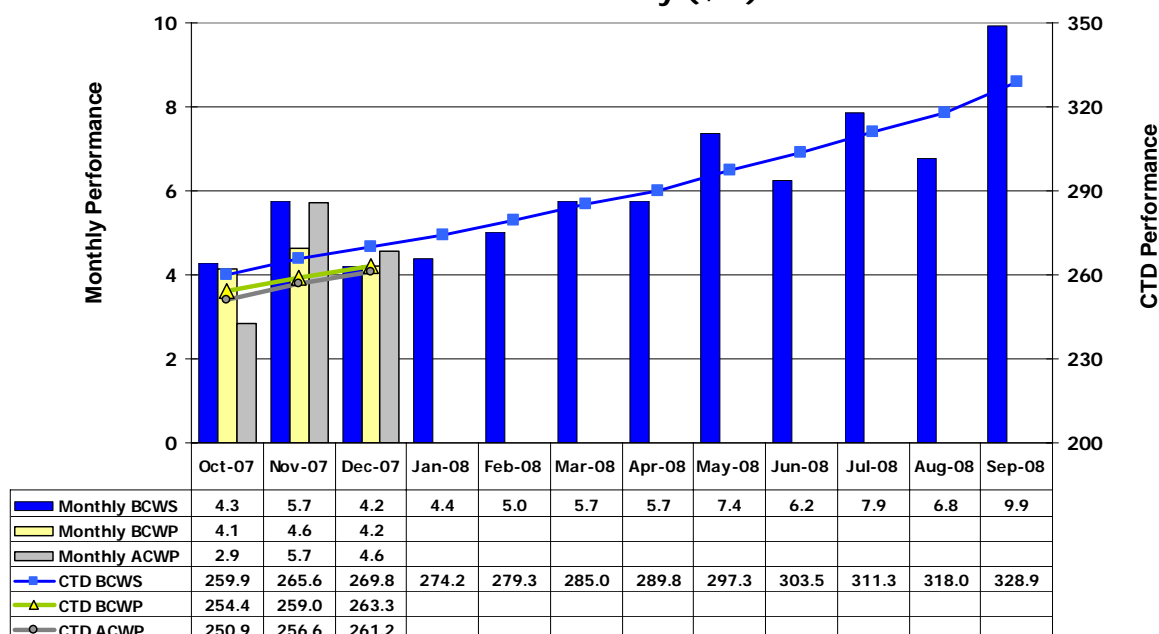
- Remedial investigation costs for 200-PW-2/4 and prior year costs for the 200-PW-1 Z-9 slant borehole (-\$3.5M).
- Prior year overruns associated with 200-LW-1 boreholes (-\$1.6M).
- Offset by significant favorable passbacks to the project and miscellaneous cost under runs in several operable units (+\$3.8M).

The favorable CV for Reliability Projects (+\$0.3M) is primarily due to the following factors:

- Increase in steel prices for prior-year facility and water projects (-\$3.0M).
- Prior year telecommunication projects technology deployment (-\$0.5M).
- Offset by favorable bids and underruns in Project L-325, *A-8 Substation*, (+\$1.5M), capital equipment procurements (+\$1.0M), road refurbishments (+\$0.7M), L-429, *12-Inch Water Line Mortar Lining Along 4th Street from Baltimore to Canton* (+\$0.5 M), and other miscellaneous (+\$0.1M).

The favorable CV for Closure Services (+\$0.3M) is within established thresholds.

Performance Analysis CTD and Monthly (\$M)



Milestone Achievement

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The FY 2008 Enforceable Agreement milestone information provided herein is based upon the current baseline including RL-approved changes. Changes from month-to-month in both the total number of milestones to be completed and in the forecast status of upcoming milestones are the result of BCRs approved during the reporting period.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
CPDD-07-004	212-N nuclear facility hazard reduction and downgrade completed	RL	11/30/07	10/25/07		Complete
M-091-40L-016	M-91-40L.4.D Quarterly Burial Ground vent/substrate sampling results (1st Qtr 2008)	TPA	11/30/07	11/21/07		Complete
CPDD-07-008	Complete Construction of Project L-626, 100B-A Water System Enhancement	RL	12/31/07	12/11/07		Complete
M-091-40L-017	M-91-40L.5.A Quarterly Burial Ground vent/substrate sampling results (2nd Qtr 2008)	HQ	2/29/08			On schedule
CPDD-07-0010	Complete phase one of the BC Cribs and Trenches Treatability Test Plan	RL	3/30/08			On schedule
CPDD-08-001	241-U-361 Settling Tank Characterization and Sampling completed	RL	3/31/08		2/29/08	Ahead of schedule
M-091-40L-018	M-91-40L.5.B Quarterly Burial Ground vent/substrate sampling results (3rd Qtr 2008)	HQ	5/30/08			On schedule
CPDD-08-004	Complete phase 2a of the BC Cribs and Trenches Treatability Test Plan	RL	7/31/08			On schedule
CPDD-08-008	Submit Draft A Revised Feasibility Study Report and Revised Proposed Plan for the 200-CW-5, and 200 SC-1 OUs	HQ	7/31/08			On schedule
M-091-40L-019	M-91-40L.5.C Quarterly Burial Ground vent/substrate sampling results (4th Qtr 2008)	HQ	8/29/08			On schedule
RL40.2c CPDD-08-003	Complete characterization of potential contamination plume in the BC Cribs and Trenches	RL	8/30/08			On schedule
CPDD-08-006	Complete 231Z nuclear facility hazard reduction	RL	9/30/08		3/24/08	Ahead of schedule